

BLOCK COPOLYMER ELASTOMER CATHETER BALLOONS

Abstract of the Disclosure

Balloons for medical devices, particularly balloon angioplasty catheters, are made from particular block copolymer thermoplastic elastomers in which the block copolymer is made up of hard segments of a polyester or polyamide and soft segments of polyether; the polyester hard segments are polycesters of an aromatic dicarboxylic acid and a C₂-C₄ diol; the polyamide hard segments are polyamides of C₆ or higher carboxylic acids and C₆ or higher organic diamines or of C₆ or higher aliphatic ω-amino-α-acids, and the polyether soft segments are polyethers of C₂-C₁₀, diols; the block copolymer has a low flexural modulus, namely less than 150,000 psi; the block copolymer has a hardness, Shore D scale, of greater than 60; and the percentage by weight of the block polymer attributable to the hard segments is between about 50% and about 95%. The polymers provide high strength, thin wall, compliant and semi-compliant balloons, which leads to a low profile catheter. The low profile catheters have very good initial crossing, good trackability, good recrossing after first inflation.